

# (12) UK Patent Application (19) GB (11) 2 189 511 (13) A

(43) Application published 28 Oct 1987

(21) Application No 8610286

(22) Date of filing 26 Apr 1986

(71) Applicant  
Falni S.p.A.,

(Incorporated in Italy),

via V. Veneto 13, Bovezzo (Brescia), Italy

(72) Inventors  
Pietro Falni,  
Giuseppe Falni

(74) Agent and/or Address for Service  
Potts Kerr & Co., 15 Hamilton Square, Birkenhead,  
Merseyside L41 6BR

(51) INT CL<sup>4</sup>  
D06F 37/26

(52) Domestic classification (Edition I)  
D1A E111 FC

(56) Documents cited  
GB A 2096649

(58) Field of search  
D1A  
F4G  
Selected US specifications from IPC sub-class D06F

(54) A drum housing particularly for washing machines

(57) The present invention relates to a housing for washing machines in particular which consists of a double bottom made of two moulded units (3, 4) of plastics material which are joined together axially and secured together and to the body (1) of the housing, the two units (3, 4) assembled together having on their perimeter means (9) for attachment to the body (1) of the housing and at the centre a boss (7) supporting the shaft of the rotating drum.

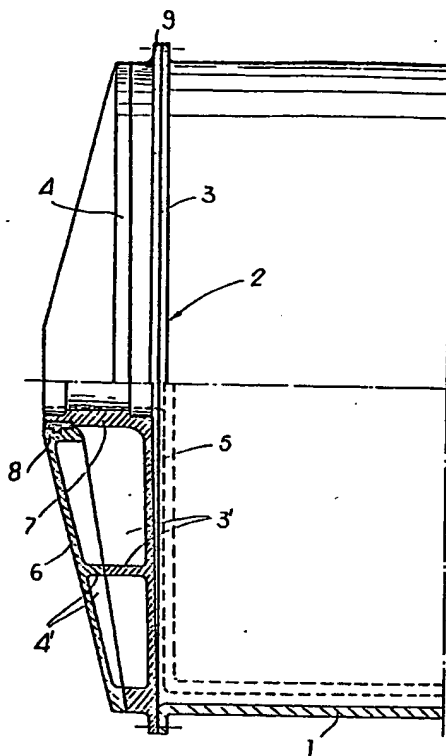
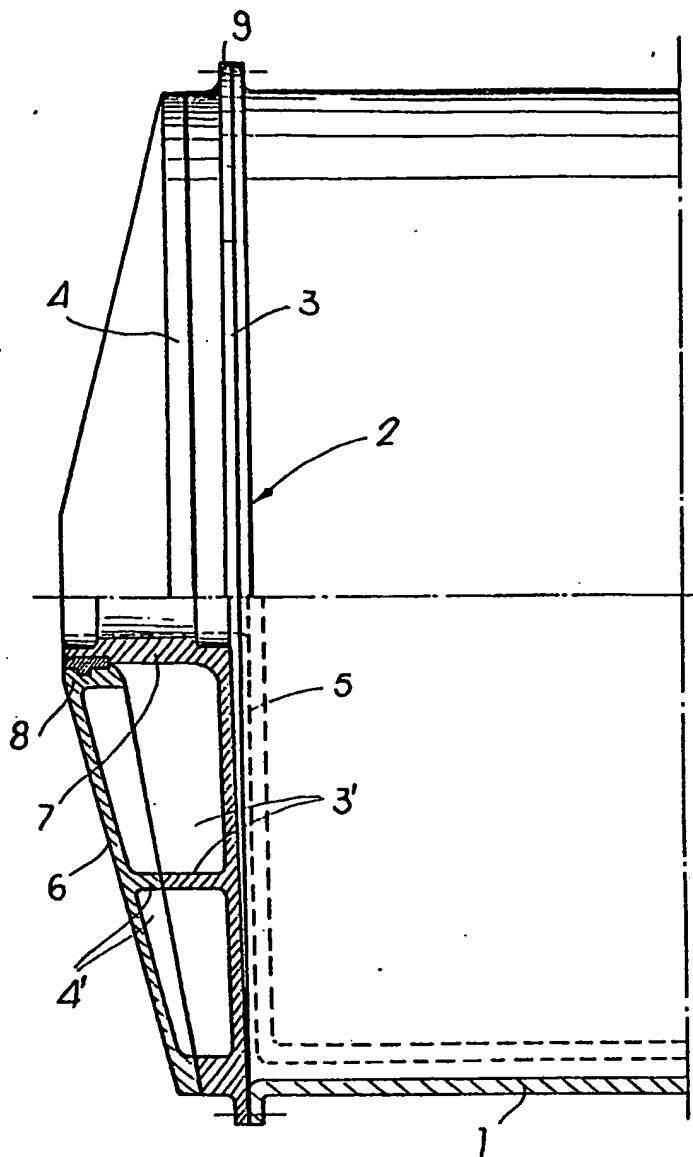
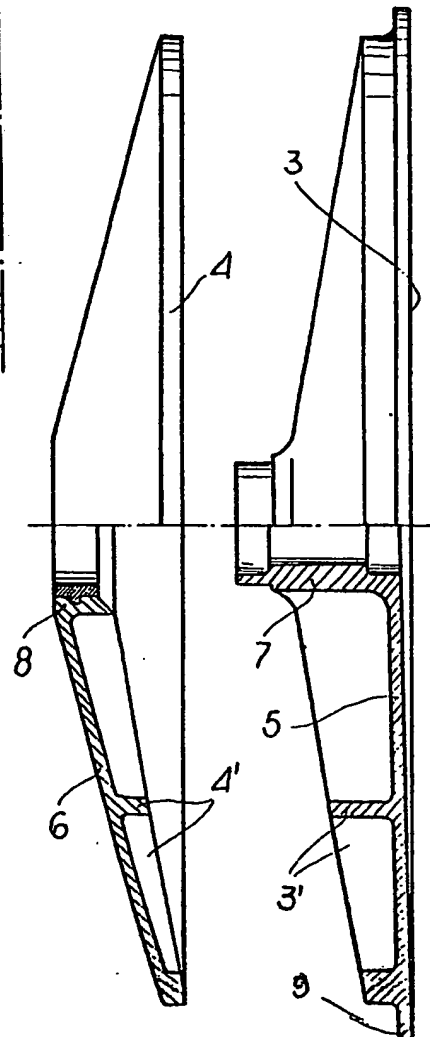


Fig. 2

GB 2 189 511 A

2189511

*Fig. 2**Fig. 1*

## SPECIFICATION

### A drum housing particularly for washing machines

- 5 The present invention relates to a drum housing particularly for washing machines.

In addition to washing machine drum housings made entirely of sheet metal types of housing consisting of an annular body of sheet metal and a  
10 moulded base of plastics material attached to the said body and also housings having an annular body and a moulded base which are both made of plastics material and then secured together are known at the present time,

15 Normally the bases of these housings, when made of plastics material, consist of a single unit which must support the rotating drum but is subjected to deformation when acted on by a force. In order to prevent deformation of the bases, these are provided  
20 on at least the rear side with stiffening ribs or fins which, in order to be effective, must be robust and thus result in an increase in both the weight and the dimensions of the base and therefore of the housing as a whole.

25 The object of this invention is to provide a housing of plastics material for washing machines in particular which has a double bottom made of two assembled units which increase the mechanical strength while reducing the size and thickness and  
30 therefore the weight and cost of the base itself.

According to the present invention there is provided a drum housing for washing machines in particular, comprising an annular body and a base fitted and attached to the said annular body, in which  
35 the said base consists of two complementary units which are moulded from plastics material, joined together axially and secured together and in which the two assembled units have on their perimeter means for their attachment to the annular body of  
40 the housing and at the centre a boss supporting the shaft of the rotating drum which is associated with the housing.

Preferably, one of the two units has a first wall which is designed to form the true base of the  
45 housing and has a central tubular boss, and in which the other unit has a second wall at a distance from the first wall and is designed to form an auxiliary base, this second wall having a central annular portion which engages concentrically with the  
50 tubular boss of the first unit, ribs or fins which fit together when the two units are assembled being placed between the opposing faces of the two units.

Further preferably, the two units comprising the base are secured together and to the annular body of  
55 the housing by welding, insertion and/or by mechanical means.

The present invention will be further illustrated, by way of example, with reference to the accompanying drawings, in which:

60 *Figure 1* illustrates the units forming the housing separately and in partial cross-section; and  
*Figure 2* illustrates the assembled housing, again in partial cross-section.

The housing in question consists of an annular  
65 body (1) which is moulded for example from plastics

material and a base (2) which is constructed as a separate component and is subsequently attached to the said annular body (1).

In accordance with the invention, base (2) consists  
70 of two complementary units (3, 4) one inner and one outer, both of which are moulded from plastics material and assembled together.

Inner unit (3) includes a wall (5) which is designed to form the true base of the housing while outer unit  
75 (4) includes a wall (6) at a distance from the wall of the inner unit and consists of an additional base. At the centre of the wall (5) the inner unit (3) has a tubular boss (7) which is designed to connect axially with a corresponding annular zone (8) provided in  
80 the centre of the wall (6) of outer unit (4).

The two units (3, 4) also have ribs or fins (3', 4') respectively on their opposing faces which are designed to fit together when the two units are joined axially, see *Figure 2*, and then be secured  
85 together by welding or insertion, or by using bolts or rivets or other appropriate means so as to form a double bottom.

On the periphery at least the inner unit (3), or more preferably both units (3, 4), have a flange (9) whereby  
90 the two units, once they have been assembled to form the double bottom, are attached by appropriate means to annular body (1) in order to complete the housing.

A base with this kind of structure is particularly  
95 robust and of great mechanical strength so that the two units which comprise it can be made of relatively limited thickness so as to make a corresponding reduction in overall size, weight and also cost.

In addition to this the base is not subjected to any  
100 particular deformation regardless of the load applied to it and the direction of the forces involved thus ensuring that the rotating drum associated with the housing, the shaft of which is located between bushes in the central boss of the double bottom, is  
105 supported and functions properly and safely.

## CLAIMS

1. A drum housing for washing machines in particular, comprising an annular body and a base fitted and attached to the said annular body, in which the said base consists of two complementary units which are moulded from plastics material, joined together axially and secured together and in which  
110 the two assembled units have on their perimeter means 9 for their attachment to the annular body of the housing and at the centre a boss 7 supporting the shaft of the rotating drum which is associated with the housing.

2. A drum housing as claimed in claim 1, in which one of the two units has a first wall which is designed to form the true base of the housing and has a central tubular boss, and in which the other unit has a second wall at a distance from the first wall and is designed to form an auxiliary base, this second wall having a central annular portion which engages concentrically with the tubular boss of the first unit, ribs or fins which fit together when the two units are assembled being placed between the opposing faces  
125 of the two units.

3. A housing as claimed in claim 1 or 2, in which the two units comprising the base are secured together and to the annular body of the housing by welding, insertion and/or by mechanical means.
- 5 4. A drum housing, substantially as hereinbefore described with reference to the accompanying drawings.

---

Printed for Her Majesty's Stationery Office by  
Croydon Printing Company (UK) Ltd, 9/87, D8991685.  
Published by The Patent Office, 25 Southampton Buildings, London, WC2A 1AY,  
from which copies may be obtained.